FUTURE FISHERIES IMPROVEMENT PROGRAM

FWP RECOMMENDATIONS TO THE FUTURE FISHERIES REVIEW PANEL SUMMER 2017

1) **Blackfoot River fish screen** (020-2017). The mainstem Blackfoot River is a tributary to the Clark Fork River and supports two imperiled fish species, Bull Trout and Westslope Cutthroat Trout. This project is located in an area that is considered a migratory area for both Bull and Westslope Cutthroat Trout, and is a critical Bull Trout area. This project would screen an irrigation diversion by installing a low-maintenance Farmer's fish screen with a headgate to allow for hydraulic control. A limited amount of instream wood and willow plantings would be installed along the river bank margin to protect the new infrastructure. The goal is to eliminate fish entrainment, improve migratory corridors, and allow for efficient irrigation practices.

REQUEST	$49,949	ITEMS REQUESTED BY APPLICANT	Construction materials, equipment/labor
MATCH	$124,205.20		
% MATCH	71%		
TOTAL COST	$174,154.20		
FWP STAFF RECOMMENDATION: We recommend full funding (**$49,949**) if the applicant can confirm who is going to be responsible for operation and maintenance (and it is not FWP). **RIT eligible.**			

2) **Deer Creek road decommissioning** (021-2017). Deer Creek is a tributary to Seeley Lake and is within the Marshall Creek Wildlife Management Area. It currently supports populations of native Bull Trout and Westslope Cutthroat Trout. The property was purchased in 2010 and contain hundreds of miles of old logging roads. The larger project would restore the integrity of headwater basins adjacent to and upstream of known spawning and rearing areas for native trout. This specific proposed component would remove numerous undersized culverts, decommission roads, reconstruct stream crossings, and undertake large scale revegetation. The goal is to protect and enhance native Bull Trout and Westslope Cutthroat Trout populations.

REQUEST	$20,000	ITEMS REQUESTED BY APPLICANT	Equipment and labor
MATCH	$21,675		
% MATCH	52%		
TOTAL COST	$41,675		
FWP STAFF RECOMMENDATION: We recommend full funding (**$20,000**) but would like the applicant to comment on the work that FWP's wildlife division may be doing and if there are opportunities to collaborate and use funds most efficiently. **RIT eligible.**			

3) **Dry Creek channel restoration** (022-2017). Dry Creek is a tributary to the East Gallatin River. It currently supports a population of Brown Trout, and Mountain Whitefish, Rainbow Trout, and Brook

Trout may be present. The Dry Creek drainage has experienced channelization, sedimentation, irrigation withdrawals, and fish passage problems. As part of a watershed effort, projects to improve water quality, habitat, and stream function have been initiated. This project would improve stream habitat in the lower section of Dry Creek, downstream of the fish passage project. Spawning, rearing, and resident trout habitat would be improved by re-naturalizing the channelized section downstream of the diversion upgrade. This includes the establishment of more pools and improved riparian habitat. Willow, aspen, and chokecherry would be planted to establish cover along the stream corridor. Large woody debris would be placed in the channel to form scour pools and provide overhead cover. The goal is to increase spawning, rearing, and resting habitat. This project is not eligible for RIT funding.

<table>
<tr><td>REQUEST</td><td>$9,258</td><td rowspan="4">ITEMS REQUESTED BY APPLICANT</td><td rowspan="4">Construction materials (willow, aspen, chokecherry, cages, staking), equipment and labor</td></tr>
<tr><td>MATCH</td><td>$5,620</td></tr>
<tr><td>% MATCH</td><td>38%</td></tr>
<tr><td>TOTAL COST</td><td>$14,878</td></tr>
<tr><td colspan="4">FWP STAFF RECOMMENDATION: We recommend partial funding of 50% of the project cost ($7,439). We ask the applicant to address the following:
Expand on protection of plants as this area has abundant deer populations and the cost of caging is low (and with no units). Fencing is mentioned in the text but not in the budget.
What is the potential for future, natural recruitment of woody plants?
Elaborate on the LWD placement. Will the placement and sod be sufficient to withstand streamflows and not move?
Please provide a letter or statement of support by the local fisheries biologist.</td></tr>
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4) **East Deer Lodge stock water and habitat improvement** (023-2017). This project is composed of work on South Fork of Cottonwood, Orofino Gulch, the North Fork of Dry Cottonwood, and Perkins Gulch. All of these streams support populations of Westslope Cutthroat Trout. These streams are tributaries to streams feeding into the Clark Fork River. This project would develop better off-stream water sources and reduce livestock access to the stream through riparian tree-felling over three miles of stream. The goal is to enhance Westslope Cutthroat Trout spawning and rearing habitat and reduce livestock impact on the streams.

REQUEST	$25,002	ITEMS REQUESTED BY APPLICANT	Felling labor, travel [not allowable], construction materials (HDPE pipe, perf pipe/spring boxes, gravel, plumbing fixtures, fence materials, road mix), equipment
MATCH	$17,700**		
% MATCH	41%**		
TOTAL COST	$42,702		

FWP STAFF RECOMMENDATION: We recommend not funding this project (**$0**) due to questions about the efficacy of felling for long-term grazing management and the high Future Fisheries cost for those components. **NOTE: GOVERNMENT SALARIES CANNOT BE USED AS MATCH. We appreciate the goals of the project and encourage future discussion regarding fencing and water gaps for long term success. **RIT eligible**

5) **Horse Creek grazing and stream restoration** (024-2017). Horse Creek (Park County) is a tributary to the Shields River and currently supports populations of nonhybridized Yellowstone cutthroat trout and is considered to be of high conservation value. The project area has been degraded by grazing practices. The applicant proposes to install riparian fencing, create off stream stock water, and restore eroding terraces by creating floodplain benches with wetland sod. Mature willow will be planted on site. The goal is to improve water quality and improve habitat in an important cutthroat trout stream. This project was tabled in the Winter 2016 funding cycle due to limited funds, questions about the off-stream water system, and its significance to Yellowstone cutthroat trout conservation priorities.

REQUEST	$26,228	ITEMS REQUESTED BY APPLICANT	Construction materials (fence, pipeline installation, well, solar pump, stock tank, seed, stakes)
MATCH	$48,314		
% MATCH	65%		
TOTAL COST	$74,542		

FWP STAFF RECOMMENDATION: We recommend full funding (**$26,228**) if the applicant can provide additional information:

- Is the well necessary, and if so, is A/C cheaper?
- Please provide a direct response on the landowner's commitment to operation and maintenance of the project.
- What is the magnitude of impact (ie. How much is this project expected to improve fish populations, sediment, water quality)?
- Please provide a letter or statement of support from the local fisheries biologist.

RIT eligible

6) **LaValle Creek fish passage** (025-2017). LaValle Creek (Missoula County) is a tributary to the Clark Fork River that supports only non-introgressed (genetically pure) westslope cutthroat trout. This population occupies approximately 4-5 miles of stream and is managed to sustain genetic purity. This project is intended to ensure connectivity within the reach they currently occupy. Two undersized culverts, likely serving as velocity barriers during high flow periods and disrupting natural hydrologic function, would be replaced with wood bridges that meet stream simulation and 100-year flood criteria. The goal is to enhance upstream passage for stream-resident, genetically pure westslope cutthroat trout and help ensure long-term persistence. This project was tabled in the Winter 2016 funding cycle due to limited funds.

REQUEST	$18,520	ITEMS REQUESTED BY APPLICANT	Bridge brackets, bridge abutments, skid-steer, dump truck, labor, mobilization/demobilization
MATCH	$24,631		
% MATCH	57%		
TOTAL COST	$43,151		
FWP STAFF RECOMMENDATION: We recommend full funding (**$18,520**) if the applicant can confirm that Missoula County will assume future maintenance, as it is not addressed in their support letter and section IIIE references only that they are "eligible" for long-term maintenance. **RIT eligible.**			

7) **Little Warm Reservoir dam repair** (026-2017). Little Warm Reservoir is an on-stream reservoir for Little Warm Creek and contains game and prairie fishes. The primary species affected by project improvements are walleye, yellow perch, and black crappie. Repairing the dam is expected to facilitate higher water levels, which would improve the fisheries through improved spawning habitat, rearing habitat, and refuge under drought conditions. It would preserve water quantity and stabilize reservoir levels which should improve population densities and directly affect angler catch rates. This project is not eligible for RIT funding as its benefits are tied to non-native species.

REQUEST	$100,000	ITEMS REQUESTED BY APPLICANT	Twin engine scrapper
MATCH	$321,385		
% MATCH	63%		
TOTAL COST	$507,335		

FWP STAFF RECOMMENDATION: We recommend partial funding (**$ amount dependent on available funds**) if the applicant can:

- Describe the public access agreement and confirm that anglers can access the property without asking permission or through fee.
- Describe how anglers know to get to the reservoir (signage?).
- Address angler use (past and predicted).
- Define how maintenance would be split between the landowners and FWP.
- Is there stocking, and if so—how much?

8) **Park Branch Canal irrigation efficiency** (027-2017). The Park Branch and Paradise Canals in Park County come off the Yellowstone River and divert water to various landowners. This project would replace existing, obsolete flow monitors with new water measuring systems on the canals. Water level and flow would be calculated accurately, which would allow water users to show their use is within the legal limit and might be able to alter management. The goal of this project is to measure flow rate and water use on several reaches of the canals.

REQUEST	$20,526	ITEMS REQUESTED BY APPLICANT	Flow monitors, power and enclosure
MATCH	$800		
% MATCH	4%		

TOTAL COST	$21,326		

FWP STAFF RECOMMENDATION: We recommend tabling this project (**$0**) due to the weak link and commitment to improve the fishery benefit. We request that the application develop a long-term plan for the project that includes:

- Clarifying whether the users are under-utilizing or over-utilizing their water right (conflicting information in sections IIC and section IIIF), as this could mean more flow or less flow is returned to the river. Conveyance or amount diverted, not consumption, could be shown through this project (section IIIB).
- Demonstrating a clear fishery benefit, particularly for this section of the Yellowstone River (what water could this project save, and what does that mean to the Yellowstone and the fish populations?).
- The ability of the applicant to tie the project to a low water management plan (even if voluntary).
- Buy-in from water users; a 4% match does not necessarily indicate significant commitment.
- Please provide a letter or statement of support by the local fisheries biologist.

RIT eligible

9) **Rattlesnake Creek Cobban fish screen** (028-2017). Rattlesnake Creek (Missoula County) is a tributary to the Clark Fork River that is a primary spawning tributary for both native bull trout and westslope cutthroat trout, as well as fluvial rainbow and brown trout. Rattlesnake Creek has several ditches, most of which were screened in 2002 (FFIP 022-2002) with brencail-type screens. The brencail screen on the Cobban ditch and does not function as intended; it requires maintenance up to four times a day during high flow. The water users have begun to drill holes in the screen to help alleviate the clogging. This project would replace the current screen with a vertical plate, paddlewheel-driven screen. Several other projects upgraded other screens in the Rattlesnake Creek drainage (FFIP 034-2015, 025-2016). The intent of the project is to prevent fish entrainment and increase spawning habitat for salmonids in the Rattlesnake Creek drainage.

REQUEST	$14,000	ITEMS REQUESTED BY APPLICANT	Construction materials (fill, screen), equipment and labor, mobilization.
MATCH	$22,895		
% MATCH	62%		
TOTAL COST	$36,895		

FWP STAFF RECOMMENDATION: We recommend full funding (**$14,000**) if the applicant can confirm who is responsible for operation & maintenance (including more significant duties such as shutting screens down and preparing them for the start of the screening season).
RIT eligible

10) **Turkey Creek fish passage** (029-2017). Turkey Creek and an unnamed stream are tributaries to the Shields River. They currently support native Yellowstone Cutthroat Trout (YCT). These streams provide habitat for YCT secure from Brook Trout competition, due to a temporary perched culvert barrier and a

natural bedrock barrier downstream. This project would replace culverts that are fragmenting populations within the protected stream reaches with aquatic organism passage (AOP) culverts and open critical habitat. The goal is to conserve and protect Yellowstone Cutthroat Trout and reduce sediment loading to streams. There is a mainstem barrier that was installed downstream (that included Future Fisheries funds) that will eventually (along with a brook trout removal project) provide 27 miles of stream habitat for YCT.

<table>
<tr><td>REQUEST</td><td>$61,090</td><td rowspan="4">ITEMS REQUESTED BY APPLICANT</td><td rowspan="4">Construction materials (culvert, road aggregate), equipment and labor, mobilization</td></tr>
<tr><td>MATCH</td><td>$61,810**</td></tr>
<tr><td>% MATCH</td><td>50%**</td></tr>
<tr><td>TOTAL COST</td><td>$122,900</td></tr>
<tr><td colspan="4">FWP STAFF RECOMMENDATION: We recommend partial to full funding ($0 to 61,090) if the applicant can address:
An improved budget. **GOVERNMENT SALARIES CANNOT BE USED AS MATCH (and were removed from the above calculation). Additionally, LS (lump sum) is not appropriate unless there are no other ways to describe the unit. Additional detail is required for items under Equipment and Labor.
Provide additional clarification regarding where all the culverts and barriers are and which ones will be replaced with this application and those replaced/removed later.
What other aquatic organisms are passed with the AOP-type culvert?
Please provide a letter or statement of support by the local fisheries biologist.
RIT eligible</td></tr>
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